

CLAIMS

1. An optical module arranged facing a light receiving surface of a solid-state imaging device and used for irradiating a test light for said light receiving surface at testing photoelectric converting property of said solid-state imaging device, comprising:

an optical lens;

a diffusion plate adjusting an intensity distribution of a light passed through said optical lens;

10 a pinhole passing said light from said diffusion plate; and

a light blocking portion preventing an outside light from entering into an optical path leading from said lens to said pinhole.

15 2. An optical module as set for claim 1 comprising a plurality of sets of said optical lens, said diffusion plate and said pinhole.

3. An optical module as set forth in claim 2
----- further comprising a light blocking means for preventing
20 said lights output from adjacent pinholes from interfering mutually.

4. An optical module as set forth in claim 1, wherein said diffusion plate comprises a three dimensional curved surface for adjusting said intensity
25 distribution of said light.

5. An optical module as set forth in claim 2 further comprising a common diffusion plate for equalizing incident angles of lights entering into a plurality of said optical lenses.

5 6. An optical module as set forth in claim 2, wherein said diffusion plate is set near to said optical lens and apart from said pinhole.

7. A relay device transmitting necessary signals for a measurement of a photoelectric converting property
10 of a solid-state imaging device by being connected electrically to said solid-state imaging device to be measured at testing said photoelectric converting property of said solid-state imaging device, comprising:

an optical module arranged facing a light
15 receiving surface of said solid-state imaging device and used for irradiating a test light for said light receiving surface at testing photoelectric converting property of said solid-state imaging device.

8. A relay device as set forth in claim 7
20 comprising

a mounting portion for mounting said optical module and

a means for determining positions of said mounting portion and said optical module.

25 9. A relay device as set forth in claim 8,

wherein

said means for determining positions comprises a position determination pin and a position determination hole to be fit and inserted by said position determination pin formed at said optical module side.

10. A relay device as set forth in claim 8, wherein

said mounting portion comprises an opening passing said light output through said optical module and proceeding to said light receiving surface of said solid-state imaging device.

11. A relay device as set forth in claim 8, wherein said optical module comprises

15 an optical lens,

a diffusion plate adjusting an intensity distribution of a light passed through said optical lens;

a pinhole passing said light from said diffusion plate, and

20 a light blocking portion preventing an outside light from entering into an optical path leading from said lens to said pinhole.

12. A testing apparatus for irradiating a light for a solid-state imaging device and testing a photoelectric converting property of said solid-state

imaging device, comprising:

an optical module outputting an entered light
as a test light through a pinhole;

a relay device transmitting necessary signals
5 for a measurement of said photoelectric converting
property of said solid-state imaging device by being
connected electrically to said solid-state imaging
device; and

a means for moving and determining position
10 moving said optical module at a position capable of
outputting said light for said solid-state imaging device
at a state that said relay device is connected
electrically with said solid-state imaging device.

13. A testing apparatus as set forth in claim 12,
15 wherein

said relay device comprises an opening
portion for making said optical module faces a light
receiving surface of said solid-state imaging device and

said a means for determining position
20 determines position of said optical module capable of
irradiating for said light receiving surface of said
solid-state imaging device through said opening portion.

14. A testing apparatus as set forth in claim 12,
wherein said optical module comprises

25 an optical lens,

a diffusion plate adjusting an intensity distribution of a light passed through said optical lens;

a pinhole passing said light from said diffusion plate, and

5 a light blocking portion preventing an outside light from entering into an optical path leading from said lens to said pinhole.

15. A testing apparatus for irradiating a light for a solid-state imaging device and testing a
10 photoelectric converting property of said solid-state imaging device, comprising:

an optical module irradiating a light lead along a predetermined optical path from a light source for said solid-state imaging device through a pinhole;

15 a moving table holding said solid-state imaging device capable of moving in a plane being vertical to a light axis of said optical module;

a means for moving said optical module outside said predetermined optical path;

20 a half mirror inserted in said predetermined optical path at a state that said optical module is moved outside said optical path, transmitting said light from said light source proceeding to said solid-state imaging device, and reflecting a image of said solid-state
25 imaging device irradiated by said light;

a means for imaging said image reflected by
said half mirror;

a means for controlling said moving table so
that said optical axis of said optical module is
5 positioned at a predetermined position of said light
receiving surface based on a graphic date of said light
receiving surface imaged by said means for imaging.

16 A testing apparatus as set forth in claim 15,
wherein

10 said means for controlling calculates a
center of gravity of said light receiving surface from
said graphic date, and control said moving table based on
said center of gravity and a date of position of said
optical axis of said optical module memorized in advance.